

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listing of claims in the application.

Listing of Claims

1. (Currently Amended) An automatic chemical analyzer capable of determining plural components of samples by using independent reagents for respective components of said samples, ~~comprising in which said analyzer is provided with a~~ sampling mechanism having a sampling probe that dispenses the samples to reaction vessels and a mechanism for pipetting plural kinds of reagents with a same reagent pipetting probe from a reagent supply to the reaction vessels, said reaction vessels holding a reaction solution of said samples and said reagents that is analyzed, and a means for washing ~~at least the~~ reagent pipetting probe, and in order to prevent occurrence of errors of determination due to cross-contamination occurring among the reagents, the analyzer is provided with a control unit that functions to set determination conditions for judging the presence or absence of the cross-contamination occurring among the reagents and to make automatic judgment of the combination of items involving the cross-contamination,

wherein in order to prevent the occurrence of errors of determination due to generation of new contamination by variation of the state of the washing means, the control unit analyzer makes judgment on the presence or absence of the cross-contamination for combinations of the reagents by testing a standard sample, memorizes the judgment result in relation to the reagent combinations, compares the judgment result with the judgment result of previously made judgments for the same reagent combinations; and when these results differ more than a predetermined amount, judges that the state of the washing means has changed, and indicates it to the user.

2. (Currently Amended) An automatic chemical analyzer capable of determining plural components of samples by using independent reagents for respective components of said samples, ~~in which said analyzer is provided with~~ comprising a sampling mechanism

having a sampling probe that dispenses the samples to reaction vessels and a mechanism for pipetting plural kinds of reagents with a same reagent pipetting probe and means for washing ~~at least~~ the reagent pipetting probe from a reagent supply to the reaction vessels, said reaction vessels holding a reaction solution of said samples and said reagents that is analyzed, and in order to prevent the occurrence of errors of determination due to cross-contamination occurring among the reagents, the analyzer is provided with a control unit that functions to set determination conditions for judging the presence or absence of the cross-contamination occurring among the reagents and to make automatic judgment of the combination of items involving the cross-contamination,

wherein in order to prevent the occurrence of errors of determination due to generation of new contamination by variation of the state of the washing means, the control unit ~~analyzer~~ makes judgment on the presence or absence of the cross-contamination for combinations of the reagents by testing a standard sample, memorizes the judgment results, conducts judgment on the presence or absence of the cross-contamination in parallel with the determination of components of the samples, compares the judgment result with the judgment result of previously made judgments for the same reagent combinations, and when these results differ more than a predetermined amount, judges that the state of the washing means has changed, and indicates it to the user.

3. (Currently Amended) A recording medium for recording operation of an automatic chemical analyzer capable of determining plural components of samples by using independent reagents for respective components of said samples, ~~in which said analyzer is provided with~~ comprising a sampling mechanism having a sampling probe that dispenses the samples to reaction vessels and a mechanism for pipetting plural kinds of reagents with a same reagent pipetting probe from a reagent supply to the reaction vessels, said reaction vessels holding a reaction solution of said samples and said reagents that is analyzed and a means for washing ~~at least~~ the reagent pipetting probe, and in order to prevent occurrence of errors of determination due to cross-contamination occurring among the reagents, the analyzer is provided with a control unit that functions to set determination conditions for

judging the presence or absence of the cross-contamination occurring among the reagents and to make automatic judgment of the combination of items involving the cross-contamination,

wherein in order to prevent the occurrence of errors of determination due to generation of new contamination by variation of the state of the washing means, a processor ~~there is installed~~ performs an operation program according to which the control unit ~~the analyzer~~ makes judgment on the presence or absence of the cross-contamination for combinations of the reagents by testing a standard sample, memorizes the judgment result in relation to the reagent combinations, compares the judgment result with the judgment result of previously made judgments for the same reagent combinations, and when the results differ more than a predetermined amount, judges that the state of the washing means has changed, and indicates it to the user.

4. (Previously Presented) An automatic chemical analyzer according to claim 1, further including an input section to input the conditions for the judgment on the presence or absence of the cross-contamination or the predetermined amount of difference in judgment results used as a criteria for the judgment on the presence or absence of the cross-contamination occurring among the reagents.

5. (Previously Presented) An automatic chemical analyzer according to claim 1, further including an input section to register in advance the conditions for the judgment on the presence or absence of the cross-contamination or the predetermined amount of difference in judgment results used as a criteria for the judgment on the presence or absence of the cross-contamination occurring among the reagents and to judge the presence or absence of the cross-contamination occurring among the reagent combinations that have been registered in advance in parallel with the determinations of the components of the samples.

6. (Previously Presented) An automatic chemical analyzer according to claim 1, further including an input section to register an interval at which the presence or absence of the cross-contamination occurring among the reagents is determined in parallel with the

determinations of the components of the samples.

7. (Previously Presented) An automatic chemical analyzer according to claim 1, further including an input section and a processor to register, in the processor, in relation to the reagent combinations, measurements of reagent(s) giving an influence, measurements of reagent(s) receiving the influence and the amount of the reagent(s) that are used when giving the influence, when said analyzer recognizes the presence of the cross-contamination occurring among the reagents.

8. (Previously Presented) An automatic chemical analyzer according to claim 1, further including an input section and a processor to register in the processor a procedure to be performed, when said analyzer recognizes the presence of the cross-contamination occurring among the reagents in relation to the reagent combinations, for preventing the cross-contamination occurring among the reagents of the reagent combinations.

9. (Previously Presented) An automatic chemical analyzer according to claim 2, further including an input section to input the conditions for the judgment on the presence or absence of the cross-contamination or predetermined amount of difference in judgment results used as a criteria for the judgment on the presence or absence of the cross-contamination occurring among the reagents.

10. (Previously Presented) An automatic chemical analyzer according to claim 2, further including an input section to register in advance the conditions for the judgment on the presence or absence of the cross-contamination or the predetermined amount of difference in judgment results used as a criteria for the judgment on the presence or absence of the cross-contamination occurring among the reagents and to judge the presence or absence of the cross-contamination occurring among the reagent combinations that have been registered in advance in parallel with the determinations of the components of the samples.

11. (Previously Presented) An automatic chemical analyzer according to claim 2, further including an input section to register an interval at which the presence or absence of the cross-contamination occurring among the reagents is determined in parallel with the determinations of the components of the samples.

12. (Previously Presented) An automatic chemical analyzer according to claim 2, further including an input section and a processor to register in the processor measurements of reagent(s) giving an influence, measurements of reagent(s) receiving the influence and the amount of the reagent(s) that are used when giving the influence, when said analyzer recognizes the presence of the cross-contamination occurring among the reagents.

13. (Previously Presented) An automatic chemical analyzer according to claim 2, further including an input section and a processor to register in the processor a procedure to be performed, when said analyzer recognizes the presence of the cross-contamination occurring among the reagents in relation to the reagent combinations, for preventing the cross-contamination occurring among the reagents of the reagent combinations.

14. (Currently Amended) An automatic chemical analyzer comprising a sample disc having sample cups containing samples to be analyzed, a reagent disc for carrying reagents, a reaction disc having reaction vessels, a sampling mechanism having a sampling probe that dispenses samples from the sample disc to the reaction vessels, a pipetting mechanism having a reagent probe for pipetting reagents from the reagent disc to the reaction vessels so that a reaction solution of samples and reagents is held in said reaction vessels, a means for washing ~~at least the reagent pipetting probe, and~~ a photometer for measuring absorbance of a reaction solution in the reaction vessel, and a control unit for instructing and monitoring operations of said sample disc, said reagent disc, said reaction disc, said sampling mechanism, said pipetting mechanism, said washing means and said photometer,

wherein determinations of plural components of a sample are determined by using independent reagents for the respective components, plural kinds of reagents are pipetted with

said reagent pipetting probe, and in order to prevent occurrence of errors of the determinations due to cross-contamination occurring among the reagents, the control unit analyzer stores predetermined determination conditions for judging the presence or absence of the cross-contamination occurring among the reagents with respect to said determination conditions and makes an automatic judgment of the cross-contamination occurring among the reagents,

wherein in order to prevent the occurrence of errors of determination due to the cross-contamination occurring among the reagents by variation of the state of the washing means, the control unit analyzer makes judgment on the presence or absence of the cross-contamination for combinations of the reagents used in succession by testing a standard sample, memorizes the judgment result in relation to combinations of the reagents used in succession, compares the result with previous judgments for the same combinations of the reagents used in succession; and when these results differ more than a certain degree, judges that the state of the washing means has changed, and indicates it to the user.

15. (Previously Presented) An automatic chemical analyzer according to claim 14, further including an input section to register an interval at which the presence or absence of the cross-contamination occurring among the reagents is determined in parallel with the determinations of the components of the samples.